

## Anomaly Detection

Datasets often contain a small number of items that deviate significantly from the norm. These *anomalies* can be of interest, since they may be the result of bad data, unusual behavior, or important exceptions to the typical trends. **Anomaly detection** is a machine learning technique concerned with finding these data points.

### Supervised and Unsupervised Approaches

Anomaly detection is another one of the machine learning techniques that can be done in both *supervised* and *unsupervised* ways. Let's have a look at both approaches.



QUESTION 1 OF 2

Which of the following is true about both supervised and unsupervised approaches to anomaly detection?

- ☒ The "anomaly" and "normal" data points are highly imbalanced
- ☐ It is a binary classification problem
- ☐ It uses training data that has no normal/anomaly labels available
- ☐ It involves identifying two major groups (clusters) of entities

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### Applications of Anomaly Detection



Let's now look at a specific example of anomaly detection, so that we can get a more concrete idea of what the process might look like. In this particular example, we'll consider what anomaly detection might look like when applied to *machinery maintenance*.



QUESTION 2 OF 2

Which of the following is not a typical application of anomaly detection?

- ☐ Outlier detection
- ☐ Condition monitoring
- ☐ Anti-malware protection
- ☒ Image recognition
- ☐ Fraud detection

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